

User's Manual

Thank you for choosing this X 7 Series power supply unit (PSU)! Please read this manual carefully and follow its instructions before installation.

Two unique technologies (interleaved PFC and phase-shifted full-bridge) can guarantee ultra-high efficiency. The smart fan of the segmented voltage regulator can create a very quiet environment. The pluggable terminal can make the wire cleaning more easily.

We would like to draw your attention to the conditions that your system works best for you without failing. To avoid such failures and to increase lifetime of your entire system, we suggest you to make sure that:

- Your PC or server is not located near a radiator or any other heat producing device
- Your PC or server is not located near a magnetic device
- Your PC or server is not located in a moist or dusty or vibrating environment
- Your PC or server is not exposed to direct sunshine
- Your PC or server must be work at stable input AC voltage

Chapter A: Features

- Cable management design
- Complies with Intel ATX12V V2.3 & EPS12V V2.92
- Certified by 80 PLUS® Bronze(800W)
- Certified by 80 PLUS® Silver(900W)
- Active PFC (PF>0.99)
- Extreme silence with intelligent-thermal fan control technology

- Supports SLI & Crossfire Multi-GPU VGA card
- Supports Intel & AMD Dual Core CPUs and Multi Core CPUs
- Supports PC, IPC, Work Station, Server
- Strict voltage regulation ($\pm 3\%$): Provides stable voltage for system
- The standby mode consumes less than 1W when +5VSB is less than 0.1A.
- Five +12V rails provides superior performance for system
- Advanced phase-shifting control full-bridge brings high reliability & efficiency
- Multiple Protections Function: OCP, OVP, UVP, OPP, SCP
- 100% Burn-In test & Hi-Pot test
- MTBF: 100Khrs

To make sure you connect your power supply properly, please check your motherboard and graphic card manuals for compatibility before connecting the power supply to any of your devices.

Chapter B: Installation

1. Turn off your computer; unplug the power cord from your old power supply.
2. Open your computer case following your case manual.
3. Disconnect all PSU connectors from the motherboard and the peripherals, such as cooler, HDD, DVD, CDR, FDD, etc.
4. Remove the old power supply from your computer case and install your new power supply.
5. Connect the 20+4 pin main power connector to your motherboard.

Note: Use the separated 20 pin if your motherboard requires 20 pin power connector.

6. Connect the 8 pin (4+4) connectors to your motherboard.

Note: Use the 4 pin or 8 pin is up to your motherboard

7. Connect the Serial-ATA connectors to the peripherals.
 8. Connect the peripheral 4 pin power connectors if you are still using IDE hard drives or optical drives.
 9. Connect the PCI EXPRESS power connector to your PCI EXPRESS graphic card.
- Note:** Please read the user's manual supplied with your graphic card for detail usage instructions.
10. Connect your cooler to the regular 4 pin peripheral connectors if you have.
 11. Close your computer case and connect the AC power cord to the power supply.

Chapter C: Booting the system

1. Main power connector (20+4 pin configuration) is correctly connected.
2. CPU +12V power connector (4 or 4+4 pin configuration) is correctly connected.
3. PCIe connector (if required by GPU) is correctly connected.
4. All other needed connectors are correctly connected.

Incorrect insertion might cause your PC unable to boot and some components might even be damaged!

5. AC cord is correctly connected to wall plug and power supply AC inlet.
6. Then close your computer case.
7. Turn on the power supply by setting the I/O switch to "I" position; your system is ready to run.
8. Turn on your PC by pushing power button on your PC case!

Chapter D: Specification

1.0 AC input voltage

Parameter	Minimum	Normal	Maximum	Unit
Vin/Voltage	90	100—240	265	Vrms
Vin/Frequency	47	---	63	Hz

1.1 Input over-current protection

The power supply shall incorporate one input fuse on the LINE side for input over current protection to prevent damage to the power supply and meet product safety requirements. Fuses should be slow blow type or equivalent to prevent nuisance trips. AC inrush current shall not cause the AC line fuse to blow under any conditions.

1.2 Efficiency

This series power supply is high efficiency; it can reach 88% at typical load.

2.0 DC output voltage regulation

Output	Range	Min.	Nom.	Max.	Unit
+12V1,2,3,4,5DC	±3%	+11.64	+12.00	+12.36	Volts
+5VDC	±5%	+4.75	+5.00	+5.25	Volts
+3.3VDC	±5%	+3.14	+3.30	+3.47	Volts
-12VDC	±10%	-10.80	-12.00	-13.20	Volts
+5VSB	±3%	+4.85	+5.00	+5.15	Volts

2.1 DC output power distribution

X7 800

Output	+3.V	+5V	+12V1	+12V2	+12V3	+12V4	+12V5	-12V	+5VSB
Max. Load	28.0A	32.0A	18.0A	18.0A	18.0A	18.0A	18.0A	0.5A	3.0A
Min. Load	0.8A	0.5A	0.0A	0.0A	0.9A	0.1A	0.0A	0.0A	0.1A

+3.3V&+5V total output not exceed 170W

+12V1, 2, 3, 4, 5 combined output not exceed 64A

Rated Power: 800W

X7 900

Output	+3.V	+5V	+12V1	+12V2	+12V3	+12V4	+12V5	-12V	+5VSB
Max. Load	30.0A	33.0A	18.0A	18.0A	18.0A	18.0A	18.0A	0.5A	3.0A
Min. Load	0.8A	0.5A	0.0A	0.0A	0.9A	0.1A	0.0A	0.0A	0.1A

+3.3V&+5V total output not exceed 170W

+12V1, 2, 3, 4, 5 combined output not exceed 72A

Rated Power: 900W

2.2 Output Ripple & Noise

	+3.3V	+5V	+12V1,2,3,4,5	-12V	+5VSB
Ripple & Noise	50mVp-p	50mVp-p	120mVp-p	120mVp-p	50mVp-p

2.3 Output protection

If the power supply is latch into shutdown stage (when OCP ,OVP or short protection is working),the power supply shall return to normal operation only after the fault has been removed and remote signal must reset for a minimum of 1 second (or the AC removed for 10 second) . Then, it will turn on again.

2.3.1 Over voltage Protection (OVP)

In case of over voltage limits are exceeded, the power supply shall provide latch-mode over-voltage protection.

2.3.2 Short Circuit Protection (SCP)

An output short circuit is defined as any output impedance of less than 0.1 ohms. The power supply shall shut down and latch off for shorting all output to GND.

2.3.3 Over Current Protection (OCP)

Overload currents are applied to each tested output rail. If the current limits are exceeded, the power supply shall shutdown and latch off.

If you have any questions or need any supports, please contact your reseller, the nearest Huntkey agent or Huntkey headquarter service center.